

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum

Job No. 22192

Written Response Required? NO

Closes CCN: N/A

OU: 200-UP-1

TSD: N/A

ERA: N/A

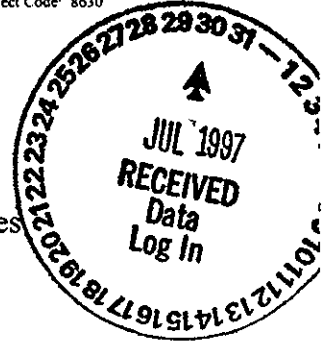
Subject Code: 8630

TO: M. A. Buckmaster, H0-19
M. J. Galgoul, H9-03

DATE: July 15, 1997

COPIES: See Below

FROM: R. T. Coffman
Sampling & Analytical Services
X7-02/531-0661



0661SUBJECT:

200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, MAY 1997, REV 0

REFERENCES:

1. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-QA-03, Plan 5.2, REV. 1, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1996, *200-UP-1 Field Screening Support Logbook*, EL-1334, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to QC-1 as specified in the reference 1 (BHI 1997). Samples collected and analyzed during May 1997 were managed under SAF C97-013 and C97-015.

Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.29, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatograph* (BHI 1997). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, *Kinetic Phosphorescence Analysis of Total Uranium in Water* (BHI 1996). Information concerning operation and calibration of the ChemChek KPA-11a is contained in the instrument logbook EL-1335.

M. A. Buckmaster, H0-19
Page 2

The technetium-99 analyses were conducted at the off-site laboratory of Quanterra Environmental Services Richland Laboratory (QTESRL). The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

Please contact me if you have any questions on this information.



R. T. Coffman, Analyst

RTC:rtc

Attachments:

- Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results, May 1997
- Attachment 2. Sample Chain of Custody Sheets

Copies:

D. E. Ayres, B1-35, w/attachment 1 and 2

- J. V. Borghese, H9-03, w/attachment 1 only
- R. T. Coffman, X7-02, w/attachment 1 and 2
- C. W. Denslow, H9-03, w/attachment 1 only
- B. H. Ford, H0-02, w/attachment 1 only
- I. D. Jacques, L6-06, w/attachment 1 only
- R. B. Kerkow, X7-02, w/attachment 1 only
- S. A. Strobe, T7-12, w/attachment 1 only
- D. A. St John, N1-28, w/attachment 1 only
- L. C. Swanson, H9-02, w/attachment 1 only
- BHI Document Control, H4-79, w/original attachments

200-UP-1 IRM Implementation Sampling
Monthly Groundwater Results, May 1997
SAF C97-013 and C97-015

Sample Location	HEIS Number	Sample Date	Analysis Date (VOA)	Chloroform (µg/L)	Carbon Tetrachloride (µg/L)	TCE (µg/L)	Uranium (µg/L)	Technetium-99 (pCi/L)
299-W19-20	BOK596	5/21/97	NA	NA	NA	NA	NA	7310
299-W19-20	BOK595	5/21/97	5/27/97	4.5	200	5.9	1730	NA
299-W19-24	BOK599	5/19/97	NA	NA	NA	NA	NA	6430
299-W19-24	BOK598	5/19/97	5/27/97	2.1	75	<2.0	2860	NA
299-W19-26	BOK5B1	5/20/97	NA	NA	NA	NA	NA	15200
299-W19-26	BOK5B0	5/20/97	5/27/97	4.9	190	<2.0	630	NA
299-W19-28	BOK5B3	5/19/97	NA	NA	NA	NA	NA	14900
299-W19-28	BOK5B2	5/19/97	5/27/97	2.0	12	<2.0	345	NA
299-W19-29	BOK5B5	5/19/97	NA	NA	NA	NA	NA	156
299-W19-29	BOK5B4	5/19/97	5/27/97	2.9	27	<2.0	54	NA
299-W19-30	BOK5B7	5/19/97	NA	NA	NA	NA	NA	6880
299-W19-30	BOK5B6	5/19/97	5/27/97	<2.0	14	<2.0	550	NA
299-W19-34A	BOK5B9	5/19/97	NA	NA	NA	NA	NA	242
299-W19-34A	BOK5B8	5/19/97	5/27/97	7.6	81	3.6	1.7	NA
299-W19-35	BOK5C1	5/19/97	NA	NA	NA	NA	NA	594
299-W19-35	BOK5C0	5/19/97	5/27/97	<2.0	165	14	45	NA
299-W19-37	BOKBR3	5/20/97	NA	NA	NA	NA	NA	1760
299-W19-37	BOK5C2	5/20/97	5/27/97	<2.0	16	<2.0	835	NA
299-W19-38	BOKBR5	5/20/97	NA	NA	NA	NA	NA	2600
299-W19-38	BOKBR4	5/20/97	5/27/97	4.1	130	<2.0	200	NA
299-W19-40	BOKBR7	5/20/97	NA	NA	NA	NA	NA	401
Duplicate @ 299-W19-40	BOKBR9	5/20/97	NA	NA	NA	NA	NA	401
299-W19-40	BOKBR6	5/20/97	5/27/97	4.4	51	<2.0	140	NA
Duplicate @ 299-W19-40	BOJBR8	5/20/97	5/27/97	4.4	50	<2.0	140	NA
Trip Blank	BOJYN1	5/19/97	5/27/97	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOKBT0	5/21/97	5/27/97	<2.0	<2.0	<2.0	NA	NA

NA - Not Analyzed

j - Value less than practical quantitation limit

Analyst:

R. F. Coffman 7-15-97
 R. F. Coffman

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685

Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection

Logbook: 200-UP-1 Field Logbook, EL-1334.

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065

Method: Kinetic Phosphorescence

Logbook: 200-UP-1 Field Logbook, EL-1334.

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-90		Page 1 of 1		
Collector HZ STEFFLER (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013						
Ice Chest No. SML-561				Field Logbook No. WHC-N-205 #64		Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory				Offsite Property No. NA		Bill of Lading/Air Bill No. NA						
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C						
				Type of Container	G/P	Gs*						
				No. of Container(s)	1	1						
Special Handling and/or Storage				Volume	20ml	40ml						
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time									
B0K595	Water	MAY 21 1997	1107	X	X							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix *	
Relinquished By HZ STEFFLER (RFS)	Date/Time 5-22-97	1335	Received By RT COFFMAN / RT Coffman	Date/Time 5/22/97	1335						S = Soil	
Relinquished By	Date/Time		Received By	Date/Time							SE = Sediment	
Relinquished By	Date/Time		Received By	Date/Time							SO = Solid	
Relinquished By	Date/Time		Received By	Date/Time							SL = Sludge	
Relinquished By	Date/Time		Received By	Date/Time							W = Water	
Relinquished By	Date/Time		Received By	Date/Time							O = Oil	
Relinquished By	Date/Time		Received By	Date/Time							A = Air	
Relinquished By	Date/Time		Received By	Date/Time							DS = Drum Solids	
Relinquished By	Date/Time		Received By	Date/Time							DL = Drum Liquids	
Relinquished By	Date/Time		Received By	Date/Time							T = Tissue	
Relinquished By	Date/Time		Received By	Date/Time							WI = Wipe	
Relinquished By	Date/Time		Received By	Date/Time							L = Liquid	
Relinquished By	Date/Time		Received By	Date/Time							V = Vegetation	
Relinquished By	Date/Time		Received By	Date/Time							X = Other	
LABORATORY SECTION	Received By	Title				Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-93		Page 1 of 1			
Collector AG RIZZO (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. SINK 497				Field Logbook No. WHC-N-205 64 PAGE 51				Method of Shipment Govt. Vehicle					
Shipped To Mobile Laboratory				Offsite Property No. N/A				Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	HNO ₃ to pH <2	HCl to pH <2 Cooled to 4C							
				Type of Container	G/P	G/S*							
				No. of Container(s)	1	1							
Special Handling and/or Storage Cool 4°C				Volume	20ml	40ml							
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time										
BOK598	Water	MAY 19 1997	1023	✓	✓								
CHAIN OF POSSESSION		Sign/Print Names				<div style="display: flex; justify-content: space-between;"> <div> SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT 68. </div> <div> Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other </div> </div>							
Relinquished By AG RIZZO (RFS)		Date/Time 5-19-97		Received By RT Coffman / RT Coffman								Date/Time 5-19-97	
Relinquished By		Date/Time		Received By								Date/Time	
Relinquished By		Date/Time		Received By								Date/Time	
Relinquished By		Date/Time		Received By								Date/Time	
LABORATORY SECTION		Received By				Title							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By							
						Date/Time							
						Date/Time							

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-95		Page 1 of 1			
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field				
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W			SAF No. C97-013							
Ice Chest No. 5142 483			Field Logbook No. WHC-N-205 64 PAGE 53			Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory			Offsite Property No. N/A			Bill of Lading/Air Bill No. N/A							
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								
			Type of Container	G/P	Gs*								
			No. of Container(s)	1	1								
Special Handling and/or Storage 200/400			Volume	20ml	40ml								
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon								
Sample No.	Matrix *	Sample Date	Sample Time										
B0K5B0	Water	MAY 20 1997	1042	✓	✓								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix *		
Relinquished By AG RIZZO (RFS)		Date/Time 1408 5-20-97		Received By RT Coffman / RT Coffman		Date/Time 1408 5/20/97		236					<ul style="list-style-type: none"> S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
LABORATORY SECTION		Received By		Title				Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-97		Page 1 of 1	
Collector AG RIZZO (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013					
Ice Chest No. SMZ 493				Field Logbook No. LWAC-N-205 G4 PAGE 51		Method of Shipment Govt. Vehicle					
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C					
				Type of Container	G/P	Gs*					
				No. of Container(s)	1	1					
Special Handling and/or Storage Cool/40C				Volume	20ml	40ml					
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon					
Sample No.	Matrix *	Sample Date	Sample Time								
BOK5B2	Water	MAY 19 1997	1119	✓	✓						
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT E.9					
Relinquished By AG RIZZO (RFS)		Date/Time 5-19-97		Received By RT COFFMAN/RT C/fmc		Date/Time 5-19-97		Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other			
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION	Received By		Title				Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By				Date/Time				

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-99		Page 1 of 1					
Collector D.R. BREWINGTON (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field					
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W				SAF No. C97-013							
Ice Chest No. GILL #268				Field Logbook No. WHE 11-205 #63				Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. NA				Bill of Lading/Air Bill No. 67A							
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C									
				Type of Container	G/P	Gs*									
				No. of Container(s)	1	1									
Special Handling and/or Storage				Volume	20ml	40ml									
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon									
Sample No.	Matrix *	Sample Date	Sample Time												
B0K5B4	Water	5/19/97	1117	✓	✓										
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT						Matrix *			
Relinquished By D.R. BREWINGTON (RFS)		Date/Time 5/19/97 1310		Received By RT COFFMAN / RT Coffman		Date/Time 1310 5/19/97		64						S = Soil	
Relinquished By		Date/Time		Received By		Date/Time								SE = Sediment	
Relinquished By		Date/Time		Received By		Date/Time								SO = Solid	
Relinquished By		Date/Time		Received By		Date/Time								SL = Sludge	
														W = Water	
														O = Oil	
														A = Air	
														DS = Drum Solids	
														DL = Drum Liquids	
														T = Tissue	
														WI = Wipe	
														L = Liquid	
														V = Vegetation	
														X = Other	
LABORATORY SECTION		Received By				Title				Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-101		Page 1 of 1							
Collector D.R. BREWINGTON (RFS) <i>DRB</i>		Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field									
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997		Sampling Location 200-W		SAF No. C97-013													
Ice Chest No. <i>50L #2681</i>		Field Logbook No. <i>WTR-11-205 #63</i>		Method of Shipment Govt. Vehicle													
Shipped To Mobile Laboratory		Offsite Property No. <i>NA</i>		Bill of Lading/Air Bill No. <i>NH</i>													
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		HNO3 to pH <2	HCl to pH <2 Cooled to 4C												
		Type of Container		G/P	Gs*												
		No. of Container(s)		1	1												
Special Handling and/or Storage		Volume		20ml	40ml												
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon												
Sample No.	Matrix *	Sample Date	Sample Time														
B0K5B6	Water	5/19/97	0918	✓	✓												
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <i>L2.0</i>						Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other					
														Relinquished By	Date/Time	Received By	Date/Time
														Relinquished By	Date/Time	Received By	Date/Time
														Relinquished By	Date/Time	Received By	Date/Time
														Relinquished By	Date/Time	Received By	Date/Time
LABORATORY SECTION		Received By				Title				Date/Time							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time							

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-103		Page 1 of 1		
Collector D.R. BREWINGTON (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013						
Ice Chest No. SML #260				Field Logbook No. WHL-N-205 #63		Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory				Offsite Property No. NA		Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	HNO3 to pH <2	HCl to pH <2 (cooled to 4C)						
				Type of Container	GP	Gs*						
				No. of Container(s)	1	1						
Special Handling and/or Storage				Volume	20ml	40ml						
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time									
B0K5B8	Water	5/19/97	1045	V	V							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT						
Relinquished By D.R. BREWINGTON (RFS) <i>D.R. Brewington</i>		Date/Time 5/19/97 1310	Received By RT Cuffman <i>RT Cuffman</i>		Date/Time 5/19/97		61					
Relinquished By		Date/Time	Received By		Date/Time							
Relinquished By		Date/Time	Received By		Date/Time							
Relinquished By		Date/Time	Received By		Date/Time							
LABORATORY SECTION		Received By				Title						
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By						
						Date/Time						
						Date/Time						

Matrix *

S = Soil

SE = Sediment

SO = Solid

SL = Sludge

W = Water

O = Oil

A = Air

DS = Drum Solids

DL = Drum Liquids

T = Tissue

WI = Wipe

L = Liquid

V = Vegetation

X = Other

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-105		Page 1 of 1				
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field					
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W			SAF No. C97-013								
Ice Chest No. Soul 4/93			Field Logbook No. WHC-N-205 64 PAGE 51			Method of Shipment Govt. Vehicle								
Shipped To Mobile Laboratory			Offsite Property No. N/A			Bill of Lading/Air Bill No. N/A								
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	HNO3 to pH <2	HCl to pH <2 Cooked to 4C									
			Type of Container	G/P	Gs*									
			No. of Container(s)	1	1									
Special Handling and/or Storage Cool 4°C			Volume	20ml	40ml									
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon									
Sample No.	Matrix *	Sample Date	Sample Time											
BOK5C0	Water	MAY 19 1997	1218	✓	✓									
B03YN1	W	5-19-97	0800		✓									
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix *			
Relinquished By AG RIZZO (RFS)		Date/Time 1413 5-19-97		Received By R. COFFMAN / R. Coffman		Date/Time 1413 5-19-97		1412					S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
Relinquished By		Date/Time		Received By		Date/Time								
Relinquished By		Date/Time		Received By		Date/Time								
Relinquished By		Date/Time		Received By		Date/Time								
LABORATORY SECTION		Received By				Title				Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time				

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-107		Page 1 of 1		
Collector AG RIZZO (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013						
Ice Chest No. 5492 493				Field Logbook No. LWPC-IV-205 64 PAGE 53		Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation		HN03 to pH <2	HCl to pH <2 Cooled to 4C					
				Type of Container		G/P	Gs*					
				No. of Container(s)		1	1					
Special Handling and/or Storage CDD/40C				Volume		20ml	40ml					
SAMPLE ANALYSIS						URANIUM TOTAL	VOA BY FIELD GC--Chlorinated Hydrocarbon					
Sample No.	Matrix *	Sample Date	Sample Time									
B0K5C2	Water	MAY 20 1997	0838	✓	✓							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT 15.					Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By AG RIZZO (RFS)		Date/Time 1408 5-20-97	Received By RT COFFMAN / RT Coffman		Date/Time 1408 5/20/97							
Relinquished By		Date/Time	Received By		Date/Time							
Relinquished By		Date/Time	Received By		Date/Time							
Relinquished By		Date/Time	Received By		Date/Time							
LABORATORY SECTION		Received By		Title		Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-109		Page 1 of 1		
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W			SAF No. C97-013						
Ice Chest No. S211L 493			Field Logbook No. LWHC - N - 205 64 PAGE 53			Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory			Offsite Property No. N/A			Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C							
			Type of Container	G/P	Gs*							
			No. of Container(s)	1	1							
Special Handling and/or Storage COOL 40C			Volume	20ml	40ml							
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time									
BOKBR4	Water	MAY 20 1997	0920	✓	✓							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By AG RIZZO (RFS)	Date/Time 1408 5-20-97	Received By R. J. COFFMAN / R. J. Coffman	Date/Time 1408 5/20/97	133.								
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
LABORATORY SECTION	Received By	Title				Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-111		Page 1 of 1		
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-LIP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. <i>SINL 493</i>			Field Logbook No. <i>WHC-N-205 64 PAGE 57</i>		Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory			Offsite Property No. <i>N/A</i>		Bill of Lading/Air Bill No. <i>N/A</i>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>			Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C							
			Type of Container	G/P	Gs*							
			No. of Container(s)	1	1							
Special Handling and/or Storage <i>COOL 40C</i>			Volume	20ml	40ml							
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time									
BOKBR6	Water	MAY 20 1997	<i>1117</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
Relinquished By AG RIZZO (RFS)	Date/Time <i>1408 5-20-97</i>	Received By <i>RT Coffman</i>	Date/Time <i>1408 5/20/97</i>									
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
LABORATORY SECTION		Received By _____ Title _____				Date/Time _____						
FINAL SAMPLE DISPOSITION		Disposal Method _____				Disposed By _____ Date/Time _____						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-113		Page 1 of 1		
Collector AG RIZZO (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-U-P-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013						
Ice Chest No. SMIL 493				Field Logbook No. WHC-N-205 64 PAGE 53		Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C						
				Type of Container	G/P	Gs*						
				No. of Container(s)	1	1						
Special Handling and/or Storage COOL 4°C				Volume	20ml	40ml						
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time									
BOKBR8	Water	MAY 20 1997	1117	✓	✓							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By AG RIZZO (RFS)	Date/Time 5-20-97	Received By RT Coffman	Date/Time 5/20/97									
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
Relinquished By	Date/Time	Received By	Date/Time									
LABORATORY SECTION	Received By	Title				Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-115		Page 1 of 1		
Collector RZ STEFFLER (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W			SAF No. C97-013						
Ice Chest No.			Field Logbook No. WHC-N-205 #65			Method of Shipment Gov. Vehicle						
Shipped To Mobile Laboratory			Offsite Property No. N/A			Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation		HCl to pH <2 Cooled to 4C							
			Type of Container		Gs*							
			No. of Container(s)		1							
Special Handling and/or Storage			Volume		40ml							
SAMPLE ANALYSIS					VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time									
BOKBT0	Water	MAY 21 1997	0750	X								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS					Matrix *	
						TOTAL ACTIVITY EXEMPT						
Relinquished By RZ STEFFLER (RFS) <i>[Signature]</i>		Date/Time 5-22-97 1335	Received By RT COFFMAN/RT <i>[Signature]</i>		Date/Time 5/22/97 1335	FAX copies of log-in to DL Stewart (372-1704) & JM Duncan (372-9052)					S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By		Date/Time	Received By		Date/Time							
Relinquished By		Date/Time	Received By		Date/Time							
LABORATORY SECTION		Received By		Title				Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time				